

We claim:-

1. A process for the preparation of polyisobutene containing at least 75 mol% of terminal vinylidene groups, in which isobutene or an isobutene-containing hydrocarbon mixture is polymerized in the liquid phase in the presence of a boron trifluoride complex catalyst having the composition

$$a(\text{BF}_3) : b(\text{Co1}) : c(\text{Co2})$$

where

- Co1 is at least one tertiary alcohol,
 - Co2 is at least one compound selected from water, primary alcohols, secondary alcohols, alkanecarboxylic acids and phenols,
 - the ratio $c:b$ is from 0.9 to 1.8 and
 - the ratio $(b+c):a$ is from 0.9 to 3.0.
2. A process as claimed in claim 1, Co1 being tert-butanol.
3. A process as claimed in claim 1 or 2, Co2 being methanol, ethanol, 2-propanol or 2-butanol.
4. A process as claimed in any of the preceding claims for the preparation of polyisobutenes having a number average molecular weight M_n of from 500 to 50 000 Dalton.

ART 34 AMDT

AMENDED SHEET